

ABSTRACT OF THE DISCLOSURE

A mechanism for controlling forces in a valve assembly such as flow induced forces. The valve assembly comprises a valve body defining first and second flow passages. A valve is movable in the valve body along an axis to control fluid flow between the first and the second flow passages. The valve has first and second control edges that are relatively spaced axially and radially such that the valve includes a radially extending surface between the first and second control edges. First and second restrictions are formed between the first and second control edges and the valve body, respectively. The first and second restrictions form an intermediate pressure region such that when the first and second flow passages are at different fluid pressures with fluid flowing past the valve, the intermediate region acts on the radially extending surface of the valve.